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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/430,289	10/29/1999	KEITH R. D'ALESSIO	100497.02	7047

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ALEXANDRIA, VA 22320

EXAMINER

HON, SOW FUN

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/430,289

Applicant(s)

D'ALESSIO ET AL.

Examiner

Sow-Fun Hon

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**--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

THE REPLY FILED 20 November 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY [check either a) or b)]**

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attachment to advisory action.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_.

Claim(s) objected to: \_\_\_\_\_.

Claim(s) rejected: \_\_\_\_\_.

Claim(s) withdrawn from consideration: \_\_\_\_\_.

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_.
10. ☒ Other: Attachment to advisory action

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*Advisory Action*

1. Applicant argues that the Office Action in Paper # 27 (mailed 08/20/03) ignores the very invention of Kvitrud by stating that Kvitrud would not have specified cyanoacrylate adhesives as the only named chemicals for containment if they were not a material of interest, the unsatisfactory containment of which poses a problem. Applicant repeats the argument that Kvitrud is directed to containers specifically designed for photocurable compositions, where such containers address problems in the prior art, by blocking certain radiation wavelengths from entering the containers to prematurely cure the photocurable contents, and that Kvitrud does not suggest that photocuring is a concern for cyanoacrylate adhesives, or that said containers would have any benefit to said cyanoacrylate adhesives.

Applicant is again respectfully reminded that Kvitrud would not have specified cyanoacrylate adhesives ('178, column 1, lines 35-37) as the only named chemicals for containment if they were not a material of interest, the unsatisfactory containment of which poses a problem. Applicant is again respectfully apprised that these adhesives are photocurable via a free radical process, being ethylenically unsaturated as evidenced by Alger (Polymer Science Dictionary, 2<sup>nd</sup> edition, page 115). Applicant is provided with additional evidence (US 2,791,504) that cyanoacrylate monomers are photocurable since they are ethylenically unsaturated ('504, column 17, lines 70-75).

2. Applicant argues that just because cyanoacrylate adhesives are curable by a free radical mechanism does not mean that they are readily curable by visible light. Applicant is, first of all, respectfully apprised that we are exposed to both visible and invisible light since the sun radiates harmful invisible ultraviolet rays as one example. Applicant is then respectfully directed to US

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2,791,504 which is evidence that cyanoacrylate monomers are photocurable since they are ethylenically unsaturated ('504, column 17, lines 70-75). The light source is ultraviolet ('504, column 19, lines 15-20).

3. Applicant argues that Fehn is not combinable with Kvitrud because it would not have been obvious to utilize the barrier layer of Fehn in the container of Kvitrud since the declarations in Paper # 20 (filed 06/21/02) and Paper # 24 (filed 12/09/02) submit principles and experimental results that clearly and unambiguously demonstrate that the claimed container is different from the combination of Kvitrud in view of Fehn, inspite of only addressing the combination of Colvin in view of Maeda. Applicant justifies this statement by pointing out since Applicant has demonstrated that increased barrier properties are not evidenced by a reduced moisture vapor transmission rate in the process of Fehn, the process of Fehn does not provide a barrier layer superior to any barrier properties provided by the (non-post halogenated) container (of Kvitrud) itself.

A clearer restatement of Applicant's argument is as follows: Applicant's disclosure cites the process of Fehn as an example of Applicant's post-fluorination process (page 17, lines 10-25). Thus the water-vapor transmission rate of the post-fluorinated container of Applicant is provided by the process of Fehn. Applicant's declarations in Paper # 20 (filed 06/21/02) and Paper # 24 (filed 12/09/02) show that a container post-fluorinated by the process of Applicant, and hence of Fehn, does not decrease the water-vapor transmission rate of the container. Applicant thus surmises that since the process of Fehn does not decrease the water-vapor transmission properties of the container, it would not have been obvious to use it to post-

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fluorinate a container for containing cyanoacrylate (since water is an accelerator for the anionic polymerization of cyanoacrylate).

Applicant is respectfully reminded that the fact that applicant has recognized another advantage (namely improved shelf life and decreased rate of viscosity change to the contained material) which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In the instant case, Fehn teaches that fluorinating a polyolefin, such as a polyethylene ('283, column 3, lines 34-40), helps prevent the escape of volatile organic liquids held in the container and provides an effective barrier against the migration of contaminants (from the container) into the interior ('283, column 2, lines 50-56), and that these containers are used to hold chemicals ('283, column 1, lines 30-40). Furthermore, Fehn teaches that the fluorinated polyethylene surface has a Teflon-like, nonsticky surface ('283, column 3, lines 34-40) which is the reason for the improvement of the resistance to the escape of the volatile organic liquids. The Teflon-like, non-sticky property also renders the internal wall surface non-adhering to the cyanoacrylate adhesive taught by Kvitrud. Thus Fehn provides the advantage to post-fluorinate the container taught by Kvitrud in order to prevent any change in and/or contamination of the composition of the cyanoacrylate adhesive.

4. Applicant argues that the declarations in Paper # 20 (filed 06/21/02) and Paper # 24 (filed 12/09/02) demonstrate that Fehn's mere disclosure of barrier properties against some materials does not mean that it is a barrier to moisture which is known to cause premature polymerization of cyanoacrylate adhesives. Applicant is respectfully requested to clarify the purpose of this argument since Applicant has already shown that the post-fluorination method of Applicant does

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not decrease the water vapor transmission rate of the container. The question of possible lack of enablement was raised in Paper # 27 (mailed 08/20/03) due to this apparent confusion over whether or not the inability of the post-fluorination of the container to decrease the water vapor transmission rate of the container is an advantage.

5. Applicant argues that Kvitrud and Fehn are non-analogous art since Kvitrud is directed to containment of substances that are readily curable by visible light, while Fehn is directed to protecting any contained substances from contaminants present in post-consumer recycled plastic material used to form the container walls, and that Kvitrud is directed to photocurable compounds which may or may not be volatile and may or may not be polar organic compounds, while the volatile organic compounds in Fehn are not photocurable.

Applicant is respectfully apprised that Kvitrud is the primary reference which addresses the problems posed by the containment of cyanoacrylate adhesives ('178, column 1, lines 35-37), one of which is shelf-life and viscosity change (adhesive has unduly hardened or thickened) ('178, column 1, lines 44-45). Fehn is the secondary reference which addresses the problems posed by the containment of chemicals ('283, column 2, lines 50-56), one of which is also shelf-life since Fehn recites the prevention of the migration into and out of the container walls (escape) of volatile organic liquids, and the prevention of the migration of contaminants into the chemicals from the container walls ('283, column 2, lines 50-56).

Furthermore, Fehn calls the fluorinated polyethylene surface "Teflon-like, non-sticky" ('283, column 3, lines 34-35), which is the reason for the improvement of the resistance to the escape of the volatile organic liquids. The Teflon-like, non-sticky property also renders the internal wall surface non-adhering to the cyanoacrylate adhesive taught by Kvitrud.

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6. Applicant argues that some of Kvitrud's container materials cannot be post-fluorinated.

Applicant is respectfully apprised that Fehn is the secondary reference which teaches the post-fluorination of polyethylene ('283, column 3, lines 34-40) and not the other materials.

7. Applicant argues that Kvitrud's pigmented containers could not be easily post-fluorinated since the containers are nearly opaque. Applicant provides an excerpt from the Fluoro-Seal website which teaches that fluorination of pigmented containers may result in slight bleaching, may require alterations in the fluorination process, and may require additional product testing. Applicant argues that Fluoro-Seal in fact states that absolute optimum performance is always obtained with natural unpigmented resin.

Applicant is respectfully apprised that nowhere in the reference provided by Applicant does Fluoro-Seal state that the barrier level is not increased by fluorination of the pigmented resin. Instead, Fluoro-Seal only states that the fluorination level may have to be increased to match the barrier performance attained with unpigmented (natural) resin, and that with a very high level of barrier performance required (challenging packaging application), an internal unpigmented (natural) layer may be necessary.

8. Applicant argues that there is no motivation to combine Stehlik with Kvitrud and Fehn. Applicant's arguments with respect to the valid combination of Kvitrud and Fehn have been addressed in the paragraphs above.

With respect to Stehlik, Kvitrud is the primary reference which teaches the polyethylene container for cyanoacrylate adhesives which have containment problems. Stehlik is the secondary reference which teaches successful sterilization of the contained cyanoacrylate adhesive for medicinal tissue-binding use ('089, column 1, lines 15-20) without reducing the

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shelf life (stability) of at least one year ('089, column 1, lines 70-75 and column 2, lines 1-5).

Stehlik thus provides the motivation to use the sterilization process on the cyanoacrylate adhesive container of Kvitrud in order to use the cyanoacrylate adhesive as a medicinal tissue-binder.

9. Applicant argues that nowhere does Kvitrud or Walles teach that increased barrier properties is required, or if or how the  $\text{SO}_3$  gas may affect the contained photocurable composition.

Applicant is respectfully reminded that Walles teaches that sulfonation of the interior surface of the container with  $\text{SO}_3$  gas decreases permeability, stress cracking and swelling of the container polymer ('575, column 2, lines 10-15) which provides the advantage and thus the motivation to use in the container of Kvitrud.


Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (703)308-3265. The examiner can normally be reached Monday to Friday from 9:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on (703)308-4251. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9311.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

  
Sow-Fun Hon

12/18/03

  
HAROLD PYON  
SUPERVISORY PATENT EXAMINER  
1772

12/22/03